

REMARKS

Claims 23-46 are pending in this case. Based upon the following remarks, it is respectfully submitted that these claims are allowable.

A. Objection to Specification

An objection to the specification was raised by the Examiner for citations to all related prior applications not being included in the "Related Applications" section. This objection is respectfully traversed. All citations have been added hereinabove.

B. §103 Rejection

Claims 23-24, 26, 28-36, 38 and 40-46 were rejected under 35 U.S.C. §103(a) as being unpatentable over Jones et al., U.S. Patent No. 4,750,112 ("*Jones*"). This rejection is respectfully traversed and it is submitted that these claims recite subject matter which is patentable over *Jones*.

Regarding independent claims 23 and 35, the Examiner contends that, among the other recited elements, *Jones* teaches "receiving an operation suspension instruction with said first pipeline subcircuit portion and in response thereto asserting one or more control signals from said pipeline subcircuit" (emphasis added). The Examiner contends further that, while *Jones* does not explicitly teach it, one of ordinary skill in the art would nonetheless have recognized that this would have been "followed by disabling said first clock signal" (emphasis added). It is respectfully submitted that not only does *Jones* not teach "receiving an operation suspension instruction with said first pipeline subcircuit portion", but *Jones* also teaches away from "disabling said first clock signal" in response to the reception of such signal.

The Examiner has cited the "NOP instruction" described in *Jones* as being an

“operation suspension instruction” as recited in the present claims. In support thereof, the Examiner cites the following text in *Jones* (with emphasis added):

Column 2, lines 56-61: “Flow control of the instructions can include ...; running the execution pipeline using artificial "NOP" (no operation) instructions while a previously empty instruction pipeline is being filled;”

Column 8, lines 50-52: “... N represents a NOP (or "no-operation) instruction cycling through the Execution Pipeline.”

Column 9, lines 32-34: “Because no machine instruction is available at time period T24, a NOP cycle is introduced into the CF stage of the EP.”

Eased upon this unambiguous language of *Jones*, it is clear that the NOP instruction is an active instruction in the sense that it acts as a space or time filler while the pipeline continues to operate, i.e., to avoid suspension of pipeline operation. Accordingly, not only would it not be obvious to disable the pipeline clock following reception of the NOP instruction, but to do so would defeat the express purpose of using the NOP instruction, i.e., to ensure that the pipeline remain in operation while awaiting performance of another operation elsewhere. In other words, the NOP instruction introduces a delay in one portion of the system that, while keeping such portion “alive”, allows another portion of the system to perform one or more other operations. Stated differently, the portion being kept “alive” is still operating inasmuch as the NOP instruction is being propagated in accordance with the clock signal. Hence, in contrast to the express language of the present claims, the clock in the *Jones* system must remain enabled to allow propagation of the NOP instruction as well as performance of one or more other operations for which the NOP instruction has been introduced to provide necessary delay(s) within the system.

AMENDMENT B

Regarding dependent claims 24 and 36, the Examiner contends that *Jones* teaches “receiving a halt instruction”. This is respectfully disputed. A word search of *Jones* revealed no disclosure of a “halt instruction”, and as discussed immediately hereinabove, the NOP instruction does not constitute a “halt instruction”.

Regarding dependent claims 26, 28-34, 38 and 40-46, in accordance with and with reference to the remarks immediately hereinabove, it is submitted that independent claims 23 and 35 recite subject matter which is patentable over *Jones*. Therefore, it is still further submitted that their respective dependent claims 26, 28-34, 38 and 40-46 recite subject matter which is patentable over *Jones* as well, particularly in view of these latter claims' further recited limitations.

C. Allowable Subject Matter

Claims 25, 27, 37 and 39 were cited as being objectionable for being dependent upon rejected base claims but were identified as being allowable if rewritten in independent form to include all limitations of their respective base claims and any intervening claims. This objection is respectfully traversed. In accordance with and with reference to the remarks in Part B hereinabove, it is submitted that independent claims 23 and 35 recite subject matter which is patentable over *Jones*. Therefore, it is still further submitted that their respective dependent claims 25, 27, 37 and 39 are not objectionable.

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AMENDMENT B


D. Conclusion

Claims 23-46 remain pending in this case. Based upon the foregoing remarks, it is respectfully that these claims are allowable and this application is in condition for allowance. Reconsideration and early allowance are submitted requested.

Respectfully submitted,

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